

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-31. (Canceled)

32. (Currently Amended) An optical irradiation device comprising a radiation source ~~including~~consisting essentially of a plurality of LEDs thermally connected to a heat pipe and disposed at an end thereof, a unitary thermal connector directly connecting the plurality of LEDs and the heat pipe for conducting heat away from the plurality of LEDs and a power supply configured to provide power to the plurality of LEDs,

wherein the heat pipe includes an inner wall configured to accommodate at least a portion of the power supply therewithin.

33. (Previously presented) The optical irradiation device according to claim 32 further comprising a fan or Peltier device proximate to the heat pipe.

34. (Previously presented) The optical irradiation device according to claim 32 further comprising a heat sink in thermal contact with the heat pipe.

35. (Previously presented) The optical irradiation device according to claim 33, further comprising a heat sink in thermal contact with the heat pipe.

36. (Previously presented) The optical irradiation device according to claim 32, wherein the heat pipe provides a means for cooling the plurality of LEDs such that the plurality of LEDs are capable of being driven to produce more radiation than the plurality of LEDs would be capable of without the heat pipe.

37. (Previously presented) The optical irradiation device according to claim 32, wherein the plurality of LEDs are formed into one or more clusters.

38. (Previously presented) The optical irradiation device according to claim 32, wherein the plurality of LEDs are formed into one or more arrays.

39. (Canceled)

40. (New) The optical irradiation device according to claim 32, wherein the power supply includes a stored energy device, and wherein at least a portion of the stored energy device is located within the inner wall of the heat pipe.

41. (New) The optical irradiation device according to claim 40, wherein the power supply includes any of a battery, a capacitor and a supercapacitor located within the inner wall of the heat pipe.

42. (New) The optical irradiation device according to claim 32, wherein the heat pipe is generally tubular in shape and includes an outer wall located concentrically about the inner wall.

43. (New) The optical irradiation device according to claim 42, wherein the heat pipe includes a substance capable of a phase change as a result of heat absorption, and wherein the substance is located between the inner wall and the outer wall.

44. (New) The optical irradiation device according to claim 42, wherein the heat pipe includes at least one wick located between the inner wall and the outer wall.

45. (New) The optical irradiation device according to claim 42, wherein the heat pipe includes a folded heat conduction element located concentrically about the inner wall radially inward of the outer wall.

46. (New) The optical irradiation device according to claim 45, wherein the folded heat conduction element in combination with the inner wall and the outer wall provides a plurality of channels.

47. (New) The optical irradiation device according to claim 46, wherein a plurality of wicks are located in alternate channels, respectively, included in the plurality of channels.

48. (New) The optical irradiation device according to claim 32, wherein the optical irradiation device is sized and configured as a hand-held device.